Phase Three: Data Collection and Analysis

Data Analysis Report

Total Maximum Daily Load for Pathogens in Valencia Creek, Santa Cruz County, California

November 29, 2005

Central Coast Regional Water Quality Control Board
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1. PROJECT DEFINITION.

1.1. Beneficial Uses

The Central Coast Water Board (Water Board) is responsible for protecting water resources from pollution and nuisance that may occur as a result of waste discharges. The Water Board determines beneficial uses (in the *Water Quality Control Plan* (Basin Plan)) that need protection. The Water Board adopted water quality objectives that are necessary to protect the beneficial water uses in the Basin Plan.

Valencia Creek beneficial uses cited in the Basin Plan are: Municipal and Domestic Supply (MUN); Ground Water Recharge (GWR); Contact and Non-Contact Recreation (REC-1 and REC-2); Wildlife Habitat (WILD); Cold Freshwater Habitat (COLD); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); and Commercial and Sport Fishing (COMM).

1.2. Problem Statement

Valencia Creek fecal coliform exceeds the REC-1 water quality objectives. Water Board staff utilized Valencia Creek water quality data collected by the Santa Cruz County Environmental Health Services to determine this exceedance of this objective.

2. NUMERIC TARGET

The most stringent water quality objective applies to the water contact recreation beneficial use. The Basin Plan contains the following REC-1 bacteria objective:

> "Fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200/100 ml, nor shall more than ten percent of total samples during any 30-day period exceed 400/100 ml."

Often, available datasets do not contain five samples in a 30-day period, so the portion of the objective that is evaluated is that "no more than ten percent of total samples during any 30-day period exceed 400 /100 mL." One can note that, in instances where fewer than five samples were collected in 30 days, the "ten percent" threshold is exceeded if any one sample exceeds 400 /100 mL.

Table 1. Numeric Targets for Aptos Creek

Fecal Coliform	
Geometric Mean	**Maximum**
200 MPN/100 mL[a]	400 MPN/100 mL[b]

[a] Based on not less than five samples for any 30-day period

[b] No more that 10% of total samples during any 30-day period

3. DATA ANALYSIS

Santa Cruz County sampling activities for Aptos Creek are shown in the Table below.

Table 2. Santa Cruz County Environmental Health Services Sampling Activity Since January 1, 2000

Station	Number of Samples	Frequency	Period of Record
Valencia Creek at Aptos Creek	92	Approximately monthly	2/1/2000 to 9/13/2005
Valencia Creek at Trout Gulch	24	Irregular prior to September 2004; Approximately monthly thereafter	5/24/2000 to 9/13/2005
Valencia Creek (East Fork)	9	Monthly	1/25/2005 to 9/13/2005
Valencia Creek (West Fork)	8	Monthly	2/3/2005 to 9/13/2005
Trout Gulch at Valencia Creek	27	Irregular prior to September 2004; Approximately monthly thereafter	5/24/2000 to 9/13/2005
Trout Gulch at Valencia Road	16	Irregular prior to December 2004; Monthly thereafter	10/24/2000 to 9/13/2005
Trout Gulch at Baker Road	9	Monthly	1/25/2005 to 9/13/2005

Valencia Creek at Aptos Creek Fecal Coliform Maximum Objective

Figure One below shows monthly fecal coliform concentrations for Valencia Creek above the confluence with Aptos Creek from 2/1/2000 to 9/13/2005. The graph displays the water contact recreation maximum (not-to-exceed) standard. Concentration ranges, the range of concentrations within the 25th -75th percentile range, the mean concentration, and the median concentration are shown. (There was not enough data at this station to calculate geometric mean.) Mean fecal coliform concentrations exceed the standard in February and May through December. Median fecal coliform concentrations exceed the standard in May through December.

Figure 1. Valencia Creek Fecal Coliform at Aptos Creek (#/100 mL) and Water Contact Recreation Maximum Standard (February 1, 2000 to September 13, 2005)

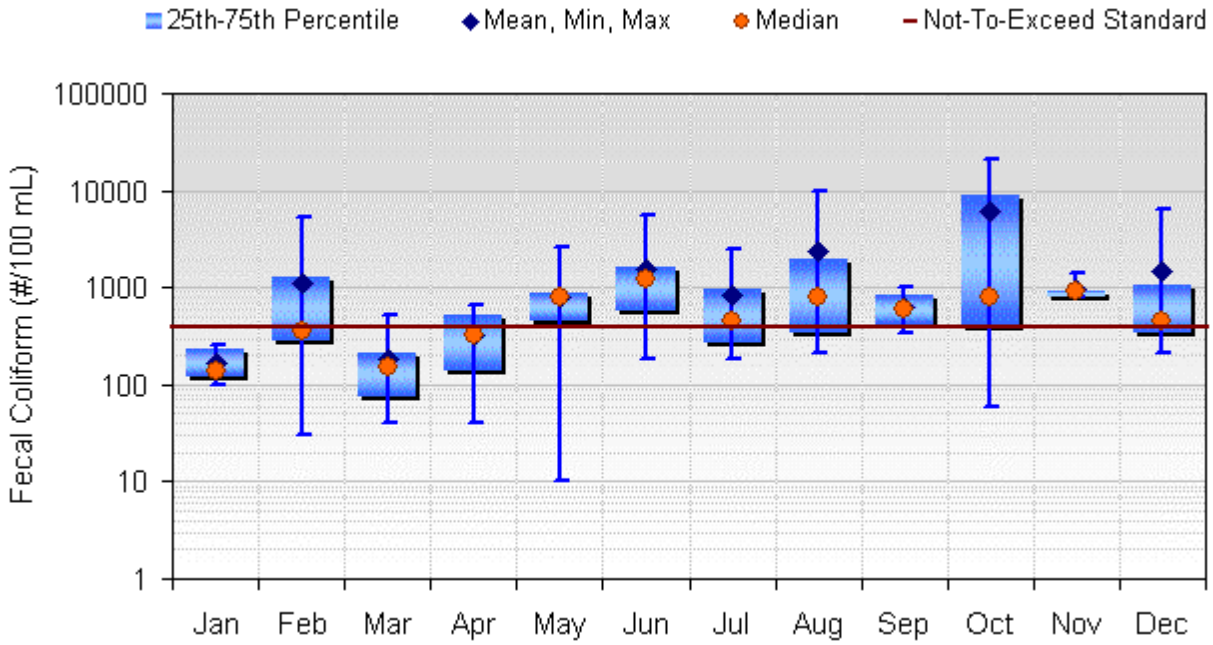

Table Three shows summary statistics for the information shown in Figure One above. The table displays statistical data on a monthly basis. The table presents the mean, median, minimum, maximum, the 25th percent deviation, the 75th percent deviation, the number of exceedances versus the sample count (XS:Count), and the percent sample exceedance (XS%). Overall, the water quality objective was exceeded 57% of the time with no apparent seasonal trend.

Table 3. Valencia Creek Fecal Coliform at Aptos Creek Data Summary (#/100 mL) and Water Contact Recreation Maximum Standard

Summary Statistics (Data: 2/1/2000 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	168	140	100	250	120	230	0:5	0%
Feb	1120	350	30	5300	280	1250	3:9	33%
Mar	183	150	40	520	75	210	1:7	14%
Apr	330	320	40	670	135	528	3:8	38%
May	805	780	10	2600	450	885	9:11	82%
Jun	1575	1220	180	5510	560	1640	8:11	73%
Jul	822	450	180	2510	267	945	4:8	50%
Aug	2389	810	210	10001	335	1945	4:6	67%
Sep	627	595	340	1000	403	839	6:8	75%
Oct	6200	784	60	21080	388	9110	6:8	75%
Nov	976	920	790	1440	800	930	5:5	100%
Dec	1498	448	210	6310	348	1054	3:6	50%
All Data	**1417**	**480**	**10**	**21080**	**268**	**1060**	**52:92**	**57%**

Valencia Creek @ Trout Gulch Creek Fecal Coliform Maximum Objective

Figure Two below shows monthly fecal coliform concentrations for Valencia Creek at Trout Gulch from 5/24/2000 to 9/13/2005. The graph displays the water contact recreation maximum (not-to-exceed) standard. For months with more than one sample, concentration ranges, the range of concentrations within the 25^{th} -75^{th} percentile range, the mean concentration, and the median concentration are shown. (There was not enough data at this station to calculate geometric mean.) Mean and median concentrations exceed the maximum objective from May through October. (July and August only have one sample.)

Figure 2. Valencia Creek Fecal Coliform at Trout Gulch Creek (#/100mL) and Water Contract Recreation Maximum Standard ((May 24, 2000 to September 13, 2005)

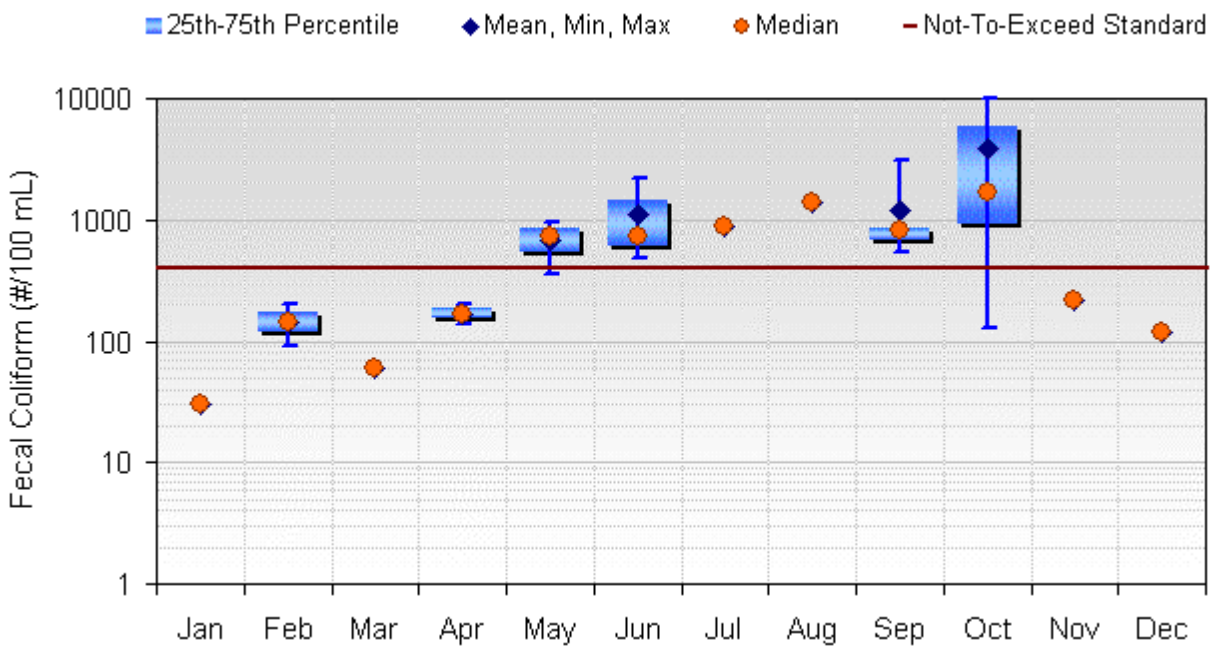

Table Four shows summary statistics for the information shown in Figure Two above. The table displays statistical data on a monthly basis. The table presents the mean, median, minimum, maximum, the 25th percent deviation, the 75th percent deviation, the number of exceedances of the water contact recreation maximum standard versus the sample count (XS:Count), and the percent sample exceedance (XS%) of the standard. Overall, the water contact recreation water quality objective was exceeded 58% of the time. However, more samples were taken from late spring to early fall. Consequently, the overall percent exceedance reflects the drier weather season more.

Table 4. Valencia Creek Fecal Coliform at Trout Gulch Creek (#/100mL) and Water Contract Recreation Maximum Standard ((May 24, 2000 to September 13, 2005)

Summary Statistics (Data: 5/24/2000 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	30	30	30	30	30	30	0:1	0%
Feb	145	145	90	200	118	173	0:2	0%
Mar	60	60	60	60	60	60	0:1	0%
Apr	170	170	140	200	155	185	0:2	0%
May	677	730	350	950	540	840	2:3	67%
Jun	1130	720	480	2190	600	1455	3:3	100%
Jul	900	900	900	900	900	900	1:1	100%
Aug	1400	1400	1400	1400	1400	1400	1:1	100%
Sep	1198	830	550	3060	690	860	5:5	100%
Oct	3947	1710	130	10000	920	5855	2:3	67%
Nov	220	220	220	220	220	220	0:1	0%
Dec	120	120	120	120	120	120	0:1	0%
All Data	**1109**	**620**	**30**	**10000**	**185**	**913**	**14:24**	**58%**

Valencia Creek (East Fork) Fecal Coliform Maximum Standard

Figure Three below shows monthly fecal coliform concentrations for Valencia Creek at the East Fork from 1/25/2005 to 9/13/2005. The graph displays the water contact recreation maximum (not to exceed) standard. There are insufficient data to calculate statistical values, since no more than one sample per month was collected at this station.

Figure 3. Valencia Creek (East Fork) Fecal Coliform (#/100mL) and Water Contract Recreation Maximum Standard (January 25, 2005 to September 13, 2005)

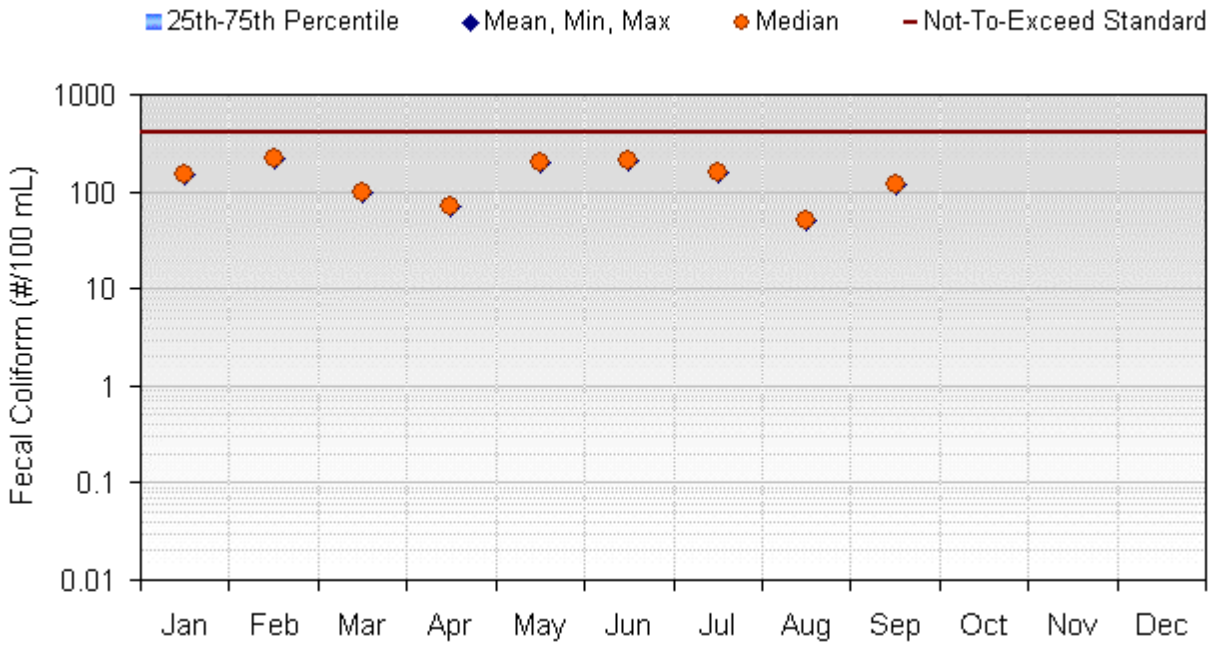

Table Five shows summary statistics for the information shown in Figure Three above. There are insufficient data to calculate statistical values, since no more than one sample per month was collected at this station. Overall, the water contact recreation water quality objective was never exceeded.

Table 5. Valencia Creek (East Fork) Fecal Coliform (#/100mL) and Water Contract Recreation Maximum Standard (January 25, 2005 to September 13, 2005)

Summary Statistics (Data: 1/25/2005 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	150	150	150	150	150	150	0:1	0%
Feb	220	220	220	220	220	220	0:1	0%
Mar	100	100	100	100	100	100	0:1	0%
Apr	70	70	70	70	70	70	0:1	0%
May	204	204	204	204	204	204	0:1	0%
Jun	210	210	210	210	210	210	0:1	0%
Jul	156	156	156	156	156	156	0:1	0%
Aug	50	50	50	50	50	50	0:1	0%
Sep	120	120	120	120	120	120	0:1	0%
Oct	0	0	0	0	0	0	0:0	n/a
Nov	0	0	0	0	0	0	0:0	n/a
Dec	0	0	0	0	0	0	0:0	n/a
All Data	**142**	**150**	**50**	**220**	**100**	**204**	**0:9**	**0%**

West Branch of Valencia Creek

Figure Four below shows monthly fecal coliform concentrations for the west branch of Valencia Creek at the Fork from 2/3/2005 to 9/13/2005. The graph displays the water contact recreation maximum (not to exceed) standard. There are insufficient data to calculate statistical values, since no more than one sample per month was collected at this station.

Figure 4. Valencia Creek (West Branch) Fecal Coliform at Fork (#/100mL) and Water Contract Recreation Maximum Standard (February 3, 2005 to September 13, 2005)

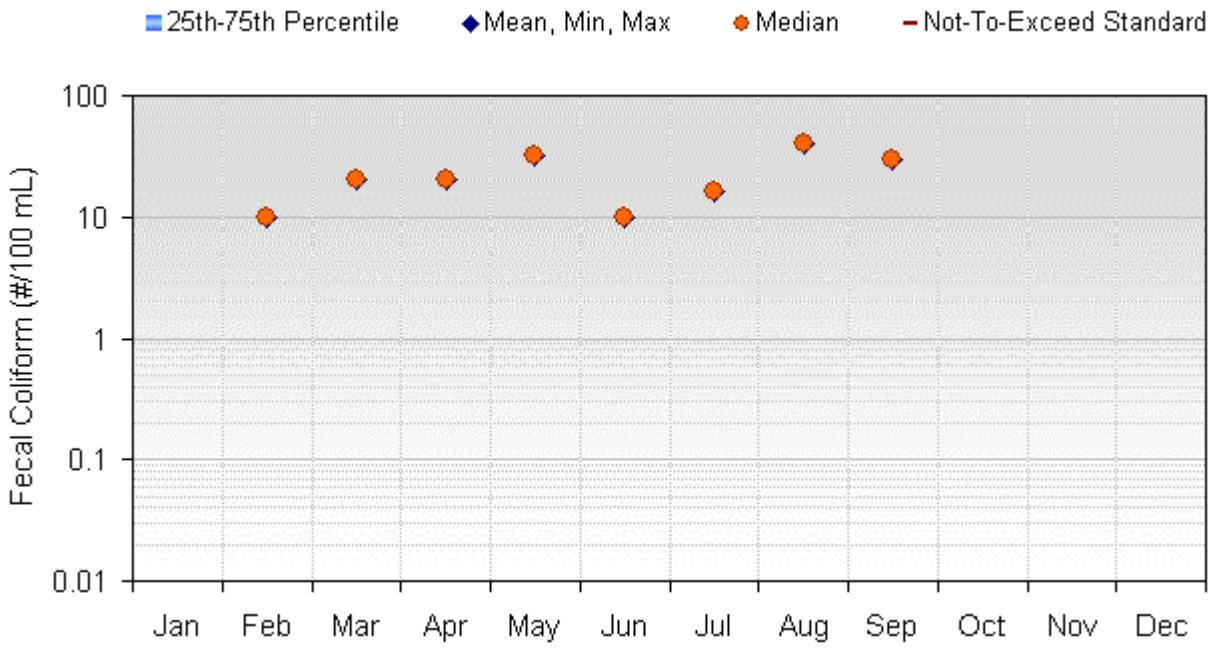

Table Six shows summary statistics for the information shown in Figure Four above. There are insufficient data to calculate statistical values, since no more than one sample per month was collected at this station. Overall, the water contact recreation water quality objective was never exceeded.

Table 6. Valencia Creek (West Branch) Fecal Coliform (#/100mL) and Water Contract Recreation Maximum Standard (February 3, 2005 to September 13, 2005)

Summary Statistics (Data: 2/3/2005 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	0	0	0	0	0	0	0:0	n/a
Feb	10	10	10	10	10	10	0:1	0%
Mar	20	20	20	20	20	20	0:1	0%
Apr	20	20	20	20	20	20	0:1	0%
May	32	32	32	32	32	32	0:1	0%
Jun	10	10	10	10	10	10	0:1	0%
Jul	16	16	16	16	16	16	0:1	0%
Aug	40	40	40	40	40	40	0:1	0%
Sep	30	30	30	30	30	30	0:1	0%
Oct	0	0	0	0	0	0	0:0	n/a
Nov	0	0	0	0	0	0	0:0	n/a
Dec	0	0	0	0	0	0	0:0	n/a
All Data	**22**	**20**	**10**	**40**	**15**	**31**	**0:8**	**0%**

Trout Gulch at Valencia Creek Fecal Coliform Maximum Standard

Figure Five below shows monthly fecal coliform concentrations for Valencia Creek at Trout Gulch from 5/24/2000 to 9/13/2005. For months with more than one sample, the graph displays the water contact recreation maximum (not to exceed) standard. Concentration ranges, the range of concentrations within the 25th -75th percentile range, the mean concentration, and the median concentration are shown. (There was not enough data at this station to calculate geometric mean.) Mean and median concentrations exceed the maximum objective in February and April through December.

Figure 5. Trout Gulch Fecal Coliform at Valencia Creek (#/100mL) and Water Contract Recreation Maximum Standard (May 24, 2000 to September 13, 2005)

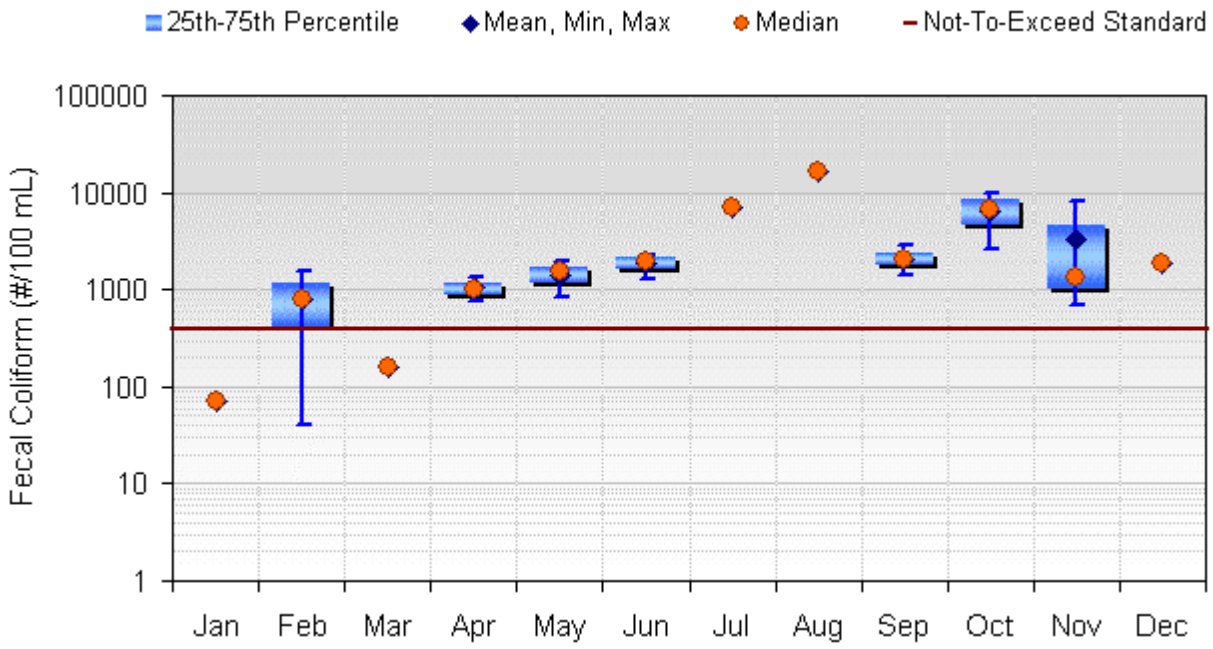

Table Seven shows summary statistics for the information shown in Figure Five above. The table displays statistical data on a monthly basis. The table presents the mean, median, minimum, maximum, the 25th percent deviation, the 75th percent deviation, the number of exceedances of the water contact recreation maximum standard versus the sample count (XS:Count), and the percent sample exceedance (XS%) of the standard. Overall, the water contact recreation water quality objective was exceeded 89% of the time. Several months (January, March, July, August, and December) only have one sample.

Table 7. Trout Gulch Fecal Coliform at Valencia Creek (#/100mL) and Water Contract Recreation Maximum Standard (May 24, 2000 to September 13, 2005)

Summary Statistics (Data: 5/24/2000 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	70	70	70	70	70	70	0:1	0%
Feb	800	800	40	1560	420	1180	1:2	50%
Mar	160	160	160	160	160	160	0:1	0%
Apr	1047	1020	770	1350	895	1185	3:3	100%
May	1437	1540	840	1930	1190	1735	3:3	100%
Jun	1827	2000	1270	2210	1635	2105	3:3	100%
Jul	7130	7130	7130	7130	7130	7130	1:1	100%
Aug	16560	16560	16560	16560	16560	16560	1:1	100%
Sep	2082	2020	1400	2890	1750	2350	5:5	100%
Oct	6463	6820	2570	10000	4695	8410	3:3	100%
Nov	3347	1350	680	8010	1015	4680	3:3	100%
Dec	1830	1830	1830	1830	1830	1830	1:1	100%
All Data	**2967**	**1750**	**40**	**16560**	**1145**	**2460**	**24:27**	**89%**

Trout Gulch at Valencia Road Fecal Coliform Maximum Standard

Figure Six below shows monthly fecal coliform concentrations for Valencia Creek at Trout Gulch from 10/24/2000 to 9/13/2005. The graph displays the water contact recreation maximum (not to exceed) standard. For months with more than one sample, concentration ranges, the range of concentrations within the 25th -75th percentile range, the mean concentration, and the median concentration are shown. (There was not enough data at this station to calculate geometric mean.) Mean and median concentrations exceed the maximum objective from April through September and November through December. Even though the sampling period spans five years, most months only have one sample. (April, May, and November have more than one sample for this sampling period.)

Figure 6. Trout Gulch Fecal Coliform at Valencia Road (#/100mL) and Water Contract Recreation Maximum Standard (October 24, 2000 to September 13, 2005)

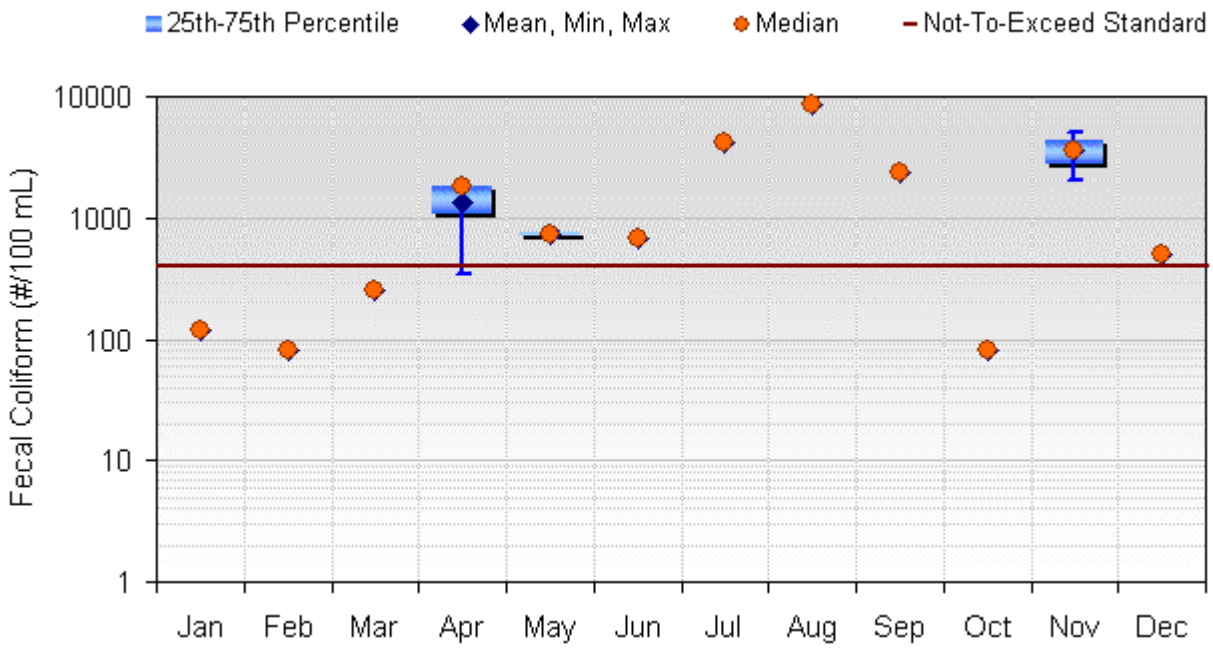

Table Eight shows summary statistics for the information shown in Figure Six above. The table displays statistical data on a monthly basis. The table presents the mean, median, minimum, maximum, the 25th percent deviation, the 75th percent deviation, the number of exceedances of the water contact recreation maximum standard versus the sample count (XS:Count), and the percent sample exceedance (XS%) of the standard. Overall, the water contact recreation water quality objective was exceeded 69% of the time.

Table 8. Trout Gulch Fecal Coliform at Valencia Road (#/100mL) and Water Contract Recreation Maximum Standard (October 24, 2000 to September 13, 2005)

Summary Statistics (Data: 10/24/2000 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	120	120	120	120	120	120	0:1	0%
Feb	80	80	80	80	80	80	0:1	0%
Mar	250	250	250	250	250	250	0:1	0%
Apr	1327	1820	340	1820	1080	1820	2:3	67%
May	729	729	690	768	710	749	2:2	100%
Jun	690	690	690	690	690	690	1:1	100%
Jul	4230	4230	4230	4230	4230	4230	1:1	100%
Aug	8640	8640	8640	8640	8640	8640	1:1	100%
Sep	2360	2360	2360	2360	2360	2360	1:1	100%
Oct	80	80	80	80	80	80	0:1	0%
Nov	3570	3570	2040	5100	2805	4335	2:2	100%
Dec	500	500	500	500	500	500	1:1	100%
All Data	**1846**	**729**	**80**	**8640**	**318**	**2120**	**11:16**	**69%**

Trout Gulch at Baker Road

Figure Seven below shows monthly fecal coliform concentrations for Valencia Creek at Trout Gulch from 1/25/2005 to 9/13/2005. The graph displays the water contact recreation maximum (not to exceed) standard. There is insufficient data to calculate statistical values, since no more than one sample per month was collected at this station. May and August samples exceed the objective.

Figure 7. Valencia Creek Fecal Coliform at Baker Road (#/100mL) and Water Contract Recreation Maximum Standard (January 25, 2000 to September 13, 2005)

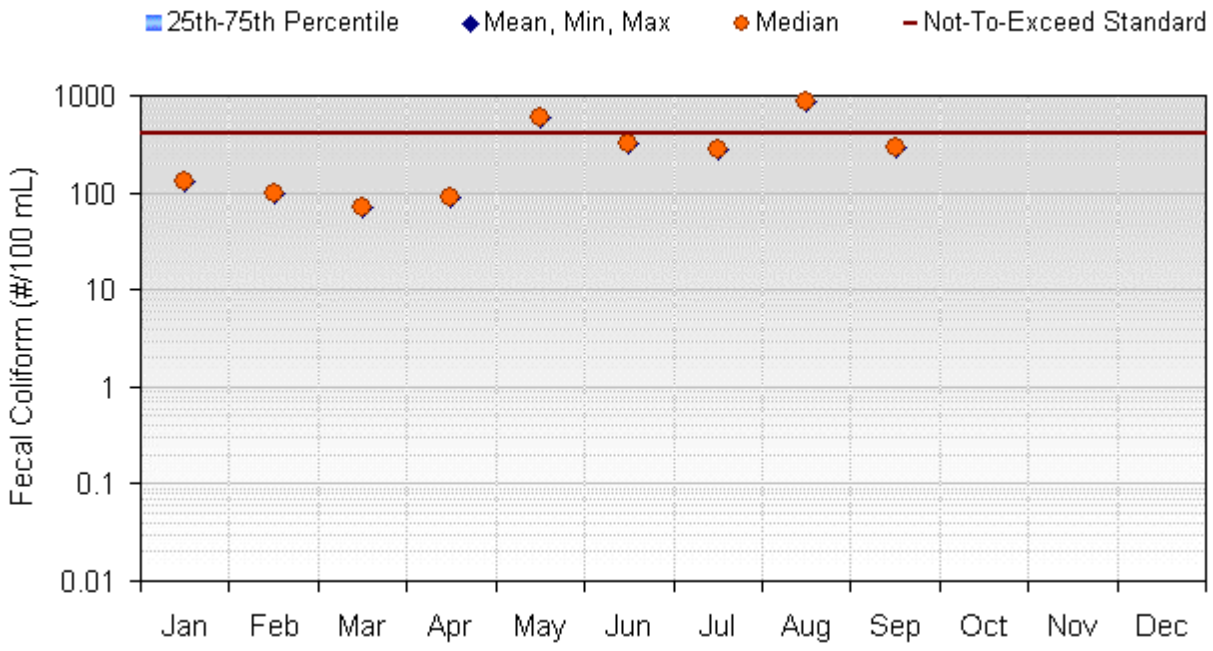

Table Nine shows summary statistics for the information shown in Figure Seven above. There is insufficient data to calculate statistical values, since no more than one sample per month was collected at this station. Overall, the water contact recreation water quality objective was exceeded 22% of the time. No samples were taken in October, November, and December.

Table 9. Trout Gulch at Baker Road (#/100mL) and Water Contract Recreation Maximum Standard (January 25, 2005 to September 13, 2005)

Summary Statistics (Data: 1/25/2005 to 9/13/2005)								
Month	**Mean**	**Median**	**Min**	**Max**	**25th**	**75th**	**XS:Count**	**XS%**
Jan	130	130	130	130	130	130	0:1	0%
Feb	96	96	96	96	96	96	0:1	0%
Mar	70	70	70	70	70	70	0:1	0%
Apr	90	90	90	90	90	90	0:1	0%
May	580	580	580	580	580	580	1:1	100%
Jun	320	320	320	320	320	320	0:1	0%
Jul	280	280	280	280	280	280	0:1	0%
Aug	880	880	880	880	880	880	1:1	100%
Sep	290	290	290	290	290	290	0:1	0%
Oct	0	0	0	0	0	0	0:0	n/a
Nov	0	0	0	0	0	0	0:0	n/a
Dec	0	0	0	0	0	0	0:0	n/a
All Data	**304**	**280**	**70**	**880**	**96**	**320**	**2:9**	**22%**

4. CONCLUSIONS AND RECOMMENDATIONS

This section provides conclusions and recommendations resulting from the above information

4.1. Conclusions

1. Valencia Creek is impaired downstream of the East and West Fork confluence.
2. Trout Gulch is impaired.
3. A Total Maximum Daily Load (TMDL) is necessary for Valencia Creek.

4.2. Recommendations

The County should continue to sample Valencia Creek and Trout Gulch on a regular basis.

APPENDIX. VALENCIA CREEK WATER QUALITY DATA

Valencia Creek at Aptos Creek	Fecal Coliform (#/100 mL)	Valencia Creek at Trout Gulch	Fecal Coliform (#/100 mL)	Valencia Creek (East Fork)	Fecal Coliform (#/100 mL)	Valencia Creek (West Fork)	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Creek	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Road	Fecal Coliform (#/100 mL)	Trout Gulch at Baker Road	Fecal Coliform (#/100 mL)
01-Feb-00	1250	24-May-00	950	25-Jan-05	150	03-Feb-05	10	24-May-00	1930	24-Oct-00	80	25-Jan-05	130
15-Feb-00	340	29-Jun-00	720	03-Feb-05	220	10-Mar-05	20	29-Jun-00	1270	07-Nov-00	5100	03-Feb-05	96
13-Mar-00	520	19-Sep-00	690	10-Mar-05	100	20-Apr-05	20	19-Sep-00	1400	19-Apr-01	1820	10-Mar-05	70
04-Apr-00	520	26-Sep-00	860	20-Apr-05	70	18-May-05	32	26-Sep-00	2890	19-Apr-01	1820	20-Apr-05	90
09-May-00	780	28-Sep-00	550	18-May-05	204	22-Jun-05	10	28-Sep-00	2020	03-May-01	690	18-May-05	580
17-May-00	10	19-Oct-00	130	22-Jun-05	210	12-Jul-05	16	19-Oct-00	2570	19-Nov-03	2040	22-Jun-05	320
18-May-00	788	07-Nov-00	220	12-Jul-05	156	10-Aug-05	40	07-Nov-00	680	01-Dec-04	500	12-Jul-05	280
24-May-00	860	18-Apr-01	140	10-Aug-05	50	13-Sep-05	30	18-Apr-01	770	25-Jan-05	120	10-Aug-05	880
14-Jun-00	1220	25-Oct-01	10000	13-Sep-05	120			19-Apr-01	1350	03-Feb-05	80	13-Sep-05	290
27-Jun-00	1680	19-Jun-03	2190					25-Oct-01	10000	10-Mar-05	250		
29-Jun-00	1040	08-Feb-04	200					19-Jun-03	2210	20-Apr-05	340		
05-Jul-00	270	12-May-04	350					19-Nov-03	1350	18-May-05	768		
27-Jul-00	310	22-Sep-04	3060					20-Nov-03	8010	22-Jun-05	690		
08-Aug-00	300	04-Oct-04	1710					08-Feb-04	1560	12-Jul-05	4230		
19-Sep-00	1000	01-Dec-04	120					12-May-04	840	10-Aug-05	8640		
26-Sep-00	720	25-Jan-05	30					22-Sep-04	2350	13-Sep-05	2360		
09-Oct-00	430	03-Feb-05	90					04-Oct-04	6820				
19-Oct-00	1118	10-Mar-05	60					01-Dec-04	1830				
11-Dec-00	210	20-Apr-05	200					25-Jan-05	70				
05-Feb-01	280	18-May-05	730					03-Feb-05	40				
06-Mar-01	270	22-Jun-05	480					10-Mar-05	160				
02-Apr-01	670	12-Jul-05	900					20-Apr-05	1020				
18-Apr-01	40	10-Aug-05	1400					18-May-05	1540				
07-May-01	910	13-Sep-05	830					22-Jun-05	2000				
04-Jun-01	360							12-Jul-05	7130				
02-Jul-01	180							10-Aug-05	16560				
07-Aug-01	440							13-Sep-05	1750				
05-Sep-01	340												
09-Oct-01	60												
18-Oct-01	450												
25-Oct-01	260												
05-Nov-01	920												
12-Dec-01	370												
14-Jan-02	140												
11-Feb-02	30												

Valencia Creek at Aptos Creek	Fecal Coliform (#/100 mL)	Valencia Creek at Trout Gulch	Fecal Coliform (#/100 mL)	Valencia Creek (East Fork)	Fecal Coliform (#/100 mL)	Valencia Creek (West Fork)	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Creek	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Road	Fecal Coliform (#/100 mL)	Trout Gulch at Baker Road	Fecal Coliform (#/100 mL)
11-Mar-02	40												
08-Apr-02	60												
14-May-02	410												
11-Jun-02	180												
09-Jul-02	660												
14-Aug-02	210												
19-Sep-02	410												
12-Nov-02	930												
09-Dec-02	1230												
13-Jan-03	250												
10-Feb-03	350												
12-Mar-03	60												
08-Apr-03	360												
12-May-03	490												
09-Jun-03	400												
19-Jun-03	3270												
07-Jul-03	590												
08-Sep-03	380												
09-Oct-03	21080												
10-Nov-03	790												
19-Nov-03	1440												
08-Dec-03	340												
12-Jan-04	230												
08-Feb-04	2000												
09-Feb-04	400												
08-Mar-04	150												
13-Apr-04	550												
10-May-04	560												
12-May-04	290												
08-Jun-04	1340												
17-Jun-04	720												
12-Jul-04	256												
09-Aug-04	10001												
18-Aug-04	1180												
14-Sep-04	470												
09-Oct-04	21080												
12-Oct-04	5120												
09-Nov-04	800												
01-Dec-04	6310												
13-Dec-04	525												

Valencia Creek at Aptos Creek	Fecal Coliform (#/100 mL)	Valencia Creek at Trout Gulch	Fecal Coliform (#/100 mL)	Valencia Creek (East Fork)	Fecal Coliform (#/100 mL)	Valencia Creek (West Fork)	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Creek	Fecal Coliform (#/100 mL)	Trout Gulch at Valencia Road	Fecal Coliform (#/100 mL)	Trout Gulch at Baker Road	Fecal Coliform (#/100 mL)
10-Jan-05	100												
25-Jan-05	120												
03-Feb-05	130												
07-Feb-05	5300												
08-Mar-05	150												
10-Mar-05	90												
12-Apr-05	160												
20-Apr-05	280												
10-May-05	2600												
18-May-05	1160												
13-Jun-05	1600												
22-Jun-05	5510												
12-Jul-05	1800												
12-Jul-05	2510												
10-Aug-05	2200												
13-Sep-05	828												
13-Sep-05	870												